

Cardiovascular Autonomic Impairment in Parkinson Disease

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Abstract

Background: Parkinson's disease (PD) is a progressive neurodegenerative disorder characterized by motor dysfunction and several non-motor features. Dysautonomia is a significant non-motor feature as well as a neuropsychiatric symptom.

Objective: To assess cardiovascular autonomic function in Parkinson patients.

Patients and Methods: Samples were collected from Al Kadhimiya teaching hospital and Baquba teaching hospital in a period lasts from 1st January to 1st November 2013. Cardiovascular autonomic function had been tested in 44 Parkinson patients with autonomic dysfunction, 23 Parkinson patients without autonomic dysfunction and 25 healthy matched controls; using Valsalva maneuver, 30:15 ratio, and effect of posture on blood pressure.

Results: The most frequent dysautonomic symptoms in parkinson disease were fainting and dizziness (postural hypotension) with a frequency of 26.8% with a P-value 0.015. The comparison between valsalva levels in three groups of study population was significant (P-value 0.04). The comparison between 30:15 ratio in three groups of study population was not significant statistically (P-value 0.344).

Conclusion: Cardiovascular autonomic dysfunction is a common non-motor symptom associated with Parkinson's disease. It may precede the development of the cardinal motor symptoms in PD, making cardiovascular dysfunction an attractive target for early detection and potential neuroprotective strategies for PD. Valsalva maneuver and effect of changes in posture on blood pressure are affecting tests in cardiovascular autonomic study.

Keywords: Parkinson's disease; autonomic symptoms, Non-motor symptoms; cardiovascular autonomic tests, orthostatic hypotension.

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